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IMPORTANT 1953 FOREST INSECT OUTBREAKS CALIFORNIA REGION

In general, the 1953 season was characterized by moderate to light loss in the California Region. There were some notable exceptions to this general rule, however. There follows a list of some of these outbreaks:

Lodgepole needleminer, Recurvaria milleri Busck

The lodgepole needleminer infestation in Yosemite and Sequoia-Kings National Parks is the most spectacular insect outbreak in California with indications of serious damage occurring over wide areas through defoliation effects alone. Ample evidence exists that many trees have already been killed as the result of defoliation and many others injured to the extent that the mountain pine beetle finds such trees ideal host material.

Host - Lodgepole pine

Principal use of host - Watershed and high recreational values in the Yosemite and Sequoia-Kings National Parks.

Type of damage - Very heavy defoliation by mining needles.

Extent of damage - 45,000 acres in Yosemite National Park and about 3,000 acres in Sequoia-Kings National Park. Many trees are so seriously defoliated that death is occurring from this damage.

History of outbreak - Last outbreak of epidemic proportion occurred in 1919 when thousands of trees were killed by a combination of needleminer and mountain pine beetle attacks, which resulted in extensive areas of ghost forests in Yosemite.

Trend - Indications are that the present egg hatch is lower than that of two years ago but still in the epidemic range.

Control measures - Control through the use of DDT applied from a B-18 converted bomber flying at an elevation of about 300 feet has been attempted. A total of 11,000 acres in Yosemite National Park was sprayed during the period of September 15 to 19. The application rate was 1 pound of DDT in one gallon of diesel oil per acre. Control results cannot be evaluated until spring of 1954.

Mountain pine beetle, Dendroctonus monticolae Hopk.

At present the insect is epidemic on only a limited acreage of lodgepole pine seriously defoliated by the lodgepole needleminer in Yosemite National Park. However, the stage is set for the insect to build up into a spectacular outbreak unless it can be held in check for the next year or so through control measures.

Host - Lodgepole pine

Principal use of host - Watershed and high recreational use in Yosemite National Park

Type of damage - Primary tree-killing barkbeetle

Extent of damage -
(a) Value - Intrinsic value
(b) Infested acreage - 500
(c) Number of infested trees - 2,000

History of outbreak - Endemic until 1952 when it attained outbreak status. In 1953 the infestation increased by 50 percent over 1952. At present it is restricted to a small acreage but with indications of its becoming explosive. The buildup is occurring in mature lodgepole pine very seriously weakened by lodgepole needleminer defoliation.

Trend - Upward

Control measures - Treatment of felled trees with ethylene dibromide emulsion has been recommended for the spring of 1954.

Jeffrey pine beetle, Dendroctonus jeffreyi Hopk.

The Jeffrey pine beetle is showing epidemic tendencies for the third year in northern California on the Lassen National Forest and the Lassen Volcanic National Park. It is causing serious loss locally.

Host - Jeffrey pine

Principal use of host - High value lumber and high recreation value

Type of damage - Primary tree-killing barkbeetle

Extent of damage -
(a) Dollar value of losses - $35,000 stumpage
(b) Infested acreage - 7,500
(c) Number of trees - 400
(d) Volume - 1,000,000 bd. ft.

History of outbreak - Recently epidemic

Trend - Leveling off

Control measures - Direct control through the salvage of infested trees and fell-peel or treat with toxic sprays unmerchantable trees and those impractical to log.

Fir sawfly, Neodiprion sp.

The true fir sawfly has recently become epidemic in many portions of California with heavy defoliation occurring in local areas on white and red fir. This is the first time this insect has been observed in California in an epidemic status except for stripping isolated individual trees.

Host - White and red fir

Principal use of host - Poles and Christmas trees

Type of damage - Defoliation

Extent of damage

(a) Dollar value of loss - Impossible to assign a dollar value to the loss because of lack of factual information. But it is estimated that heavy monetary loss is occurring in all areas where defoliation is confined to Christmas tree stock.

(b) Infested acreage - 10,000 acres scattered over a wide area including the Yosemite National Park, the Plumas, Eldorado and Tahoe National Forests.

(c) Number of trees - Data not available.

History of outbreak - Recently epidemic

Trend - Epidemic in some areas, but reduced to endemic status through the effects of a native polyhedrosis virus on the Plumas National Forest and in Yosemite National Park.

Control measures - Experimental control by use of aerial application of DDT at the rate of 1 pound per acre.

The status of other important forest insects in the California region is as follows:

The western pine beetle, Dendroctonus brevicomis Lec., is at a low endemic level over the State as a whole. The Douglas fir beetle, Dendroctonus pseudotsugae Hopk., is also at a low level except in the extreme northwestern portion of the State where some grouping tendencies have been observed. The fir engraver beetle, Scolytus ventralis Lec., was epidemic throughout the eastern part of the State from San Diego to the Oregon line during 1952 but this season only mild epidemic conditions are present in the same general area. The pine engraver beetles, Ips spp., are endemic generally throughout the State with a few local exceptions where epidemic conditions prevail. In addition, considerable top-killing is occurring throughout the mid-Sierra associated with Pityophthorus sp. This latter type of injury is usually in mature and overmature ponderosa pine.

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Berkeley, California
October 22, 1953